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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of: Christian Kropf et al.

Serial No.: 09/936,747

Group Art Unit: 1616

Filed: September 12, 2001

Examiner: S. Dodson

For: Use of Nanoscalar Water-Soluble B-(1,3) Glucans

THE ASSISTANT COMMISSIONER FOR PATENTS  
Washington, D.C. 20231

**CLEAN VERSION OF AMENDED CLAIMS**

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1. A method of producing cosmetic preparations comprising nanoscalar water soluble  $\beta$ -(1,3) glucans, which are substantially free from  $\beta$ -(1,6) linkages and have particle diameters in the area of 10 to 300 nm, for producing cosmetic and/or pharmaceutical preparations.
2. The method according to claim 1, wherein glucans based on yeasts of the family *Saccharomyces* are used.
3. The method according to claim 1, wherein glucans are used which have been obtained by contacting glucans with  $\beta$ -(1,3) and  $\beta$ -(1,6) linkages in such a way with  $\beta$ -(1,6) glucanases that practically all  $\beta$ -(1,6) linkages are loosened, whereafter the lysis products are brought into a nanoscalar form.
4. The method according to claim 3, wherein glucans are used which have been treated with glucanases based on *Trichoderma harzianum*.

5. The method according to claim 1, wherein nano particles which are embedded in a protecting colloid are used.

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6. The method according to claim 5, wherein polyvinyl alcohol or polyethylene glycol are used as a protecting colloid.

7. The method according to claim 1, wherein the glucans are used in amounts of 0.1 to 5 % by weight, based on the preparations.

8. The method according to claim 1, wherein the glucans are used for manufacture of hair care agents.

9. The method according to claim 1, wherein the glucans are used for manufacture of skin care and sun protecting agents.

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NEW CLAIMS 10-17

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10. A method of producing pharmaceutical preparations comprising nanoscalar water soluble  $\beta$ -(1,3) glucans, which are substantially free from  $\beta$ -(1,6) linkages and have particle diameters in the area of 10 to 300 nm, for producing cosmetic and/or pharmaceutical preparations.

11. The method according to claim 1, wherein glucans based on yeasts of the family *Saccharomyces* are used.

12. The method according to claim 1, wherein glucans are used which have been obtained by contacting glucans with  $\beta$ -(1,3) and  $\beta$ -(1,6) linkages in such a way with  $\beta$ -(1,6) glucanases that practically all  $\beta$ -(1,6) linkages are loosened, whereafter the lysis products are brought into a nanoscalar form.

13. The method according to claim 3, wherein glucans are used which have been treated with glucanases based on *Trichoderma harzianum*.

14. The method according to claim 1, wherein nano particles which are embedded in a protecting colloid are used.

15. The method according to claim 5, wherein polyvinyl alcohol or polyethylene glycol are used as protecting colloid.

16. The method according to claim 1, wherein the glucans are used in amounts of 0.1 to 5 % by weight, based on the preparations.